

Management of Lead Poisoning



This guideline applies to children susceptible to lead poisoning and includes assessment, testing, treatment, and education.

Eligible Population	Key Components	Recommendation	Frequency																
Children Ages 0-6	Screening & Testing	<ul style="list-style-type: none"> Risk assessment for lead exposure and blood test for children at high risk. Child is considered high risk if any of the following apply: (1) child resides in zip code or other geographic area identified as high risk by Michigan Department of Community Health (MDCH); (2) child is covered by or eligible for Medicaid or enrolled in WIC; (3) parent/guardian answers “yes” or “don’t know” to any question in the MDCH Lead Poisoning Questionnaire. A capillary blood test is acceptable for an initial test. Confirm with venous sample if high. Medical history: assess developmental progress with referral as needed. Physical exam: observe for indications of language delays or neurobehavioral/cognitive problems. 	<ul style="list-style-type: none"> Once between 6 and 12 months and again at 24 months Once for children ages 36-72 months if not tested previously. 																
	Therapeutic Intervention	<ul style="list-style-type: none"> Eliminate environmental hazards. Determine the source of lead exposure. Collaborate with local lead poisoning programs which provide home inspections. Refer parent to the local health department (most health departments will have programs to assist with home inspection, source identification and remediation). Consider changes in diet: lead absorption increases with iron, calcium deficiencies. Continue diagnostic testing (see below). Chelation therapy for blood lead levels (BLL) \geq 45 mg/dL. 																	
	Diagnostic Testing	<table border="0"> <tr> <td><u>If screening test is...</u></td> <td><u>Obtain venous test in:</u></td> <td><u>If screening test is...</u></td> <td><u>Obtain venous test in:</u></td> </tr> <tr> <td>10[*]-19 mg/dL</td> <td>3 months</td> <td>60-69 mg/dL</td> <td>24 hours</td> </tr> <tr> <td>20-44 mg/dL</td> <td>1 week^{**} – 1 month</td> <td>\geq 70 mg/dL</td> <td>immediately</td> </tr> <tr> <td>45-59 mg/dL</td> <td>48 hours</td> <td colspan="2" style="text-align: center;"><i>(Report all high BLL's to your local health department)</i></td> </tr> </table> <p>[*] Consider more frequent rescreening for children with BLLs approaching 10μg/dL. ^{**} The higher the screening BLL, the more urgent the need for a diagnostic test.</p>	<u>If screening test is...</u>	<u>Obtain venous test in:</u>	<u>If screening test is...</u>	<u>Obtain venous test in:</u>	10 [*] -19 mg/dL	3 months	60-69 mg/dL	24 hours	20-44 mg/dL	1 week ^{**} – 1 month	\geq 70 mg/dL	immediately	45-59 mg/dL	48 hours	<i>(Report all high BLL's to your local health department)</i>		Diagnostic testing required for capillary blood lead levels \geq 10 mg/dL.
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	Patient Education	<ul style="list-style-type: none"> All children: Offer anticipatory guidance regarding: hazards of lead paint & risk reduction, exposure to lead from home remedies, occupational sources, and unsafe home renovation methods; importance of washing hands before each meal, adequate intake of calcium and iron to reduce absorption, pregnancy and lead. For children with BLL \geq 10 mg/dL: explain child’s BLL and meaning, potential adverse reactions, sources of exposure, hazards of improper removal, importance of wet vs. dry cleaning, need for follow-up BLL testing, importance of nutrition to reduce absorption, results of environmental inspection; chelation therapy overview, if needed. 	During prenatal care; each well-child visit from age 3 months to 2 years																

Education resources: National Lead Information Center www.epa.gov. CDC recommendations: www.cdc.gov Revised: 2009; Approved 08/2009

SOURCES: ● Michigan Department of Community Health Diagnostic Screening/Testing Advisory Committee recommendations ● Centers for Disease Control. Advisory Committee on childhood Lead Poisoning Prevention. *Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention.* ● CDC Advisory Committee on Childhood Lead Poisoning Prevention. *Interpreting and Managing Blood Lead Levels < 10 μ g/dL in Children and Reducing Childhood Exposures to Lead: 2007.* ● American Academy of Pediatrics Committee on Practice and Ambulatory Medicine, *Recommendations for Preventive Pediatric Health Care.* ● American Academy of Pediatrics Committee on Environmental Health. *Lead Exposure in Children: Prevention, Detection and Management: 2005.*